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23373 7590 10/06/2009  
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EXAMINER

BOYLE, ROBERT C

ART UNIT

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1796

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on August 3, 2009 was filed after the mailing date of the FINAL Office Action on June 29, 2009. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.
2. While the references disclosed in the IDS are pertinent, the references have not been applied because the ‘closest’ prior art to the claims is the applied art of record.

***Attachment to Advisory Action***

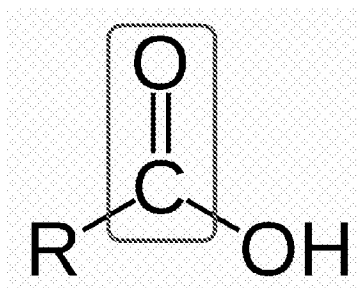
3. Applicant’s response filed September 29, 2009 has been fully considered but is not persuasive.

***Claim 9***

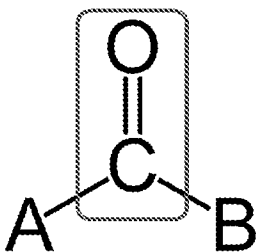
4. Applicant argues that IR bands at  $1740\text{ cm}^{-1}$  do not correspond to carboxyl end groups and that “free of components containing carbonyl bonds as determined by reflectance infrared spectroscopy” does not mean “free of carboxyl groups in a polymer.” Applicant’s argument is not persuasive.
5. Applicant states: “Free of components containing carbonyl bonds as determined by reflectance infrared spectroscopy” does not mean “free of carboxyl groups in a polymer.” However, no reasoning or evidence has been provided to show how a carboxyl group does not contain a carbonyl group.

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6. A carboxyl group is the functional group “-CO<sub>2</sub>H”, where two oxygen atoms are bonded to one carbon, and one of the oxygen atoms is double bonded with the carbon:



Compare this to a carbonyl group, which has the functional group “-CO-“ where the oxygen has a double bond with the carbon:



Thus, carbonyl groups are not limited to just ketones, but also include functional groups such as aldehydes, carboxylic acids, esters, amides, enones, acyl halides, and acid anhydride. Because Curtin teaches the product is “free of components containing carbonyl bonds”, Curtin teaches the absence of all functional groups containing a carbon-oxygen double bond, including carboxyl groups. As no evidence or arguments have been presented to refute this, Applicant’s arguments are not persuasive.

7. It is noted that the Applicant has provided a Table illustrating that IR data of carboxyl groups in polymers. However, Curtin (US 6,150,426) uses the bands at 1740 cm<sup>-1</sup> as a comparison, noting that the prior art has those bands and the polymers of Curtin do not (col. 6, lines 53-57). This is evidenced by the phrase “In contrast...” present in the beginning of the

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sentence comparing compositions of Grot to the polymers of Curtin. As the  $1740\text{ cm}^{-1}$  do not apply to the invention of Curtin, but rather show the difference between Curtin and the prior art, Applicant's arguments are not persuasive.

***Claim 10***

8. Applicant argues that since the polymers of Curtin are high molecular weight polymers, any unstable end groups cannot be detected by infrared analysis and that Curtin does not disclose any stabilizing process. Applicant's arguments are not persuasive.

9. It is noted that the examiner's rejection of claim 10 did not rely on infrared analysis, but rather on the combination of Curtin and Schreyer (US 3,085,083).

10. Specifically, Curtin discloses "Preferred compositions in accordance with the invention are also free of C-H bonds" (column 6, lines 60-65). Schreyer teaches end groups of  $\text{-CF}_2\text{H}$  (column 5, line 60-column 6, line 65). It would have been obvious to one of ordinary skill in the art that given the end group  $\text{-CF}_2\text{H}$  of Schreyer, on a fluoropolymer that is free of C-H bonds as taught by Curtin would result in the claimed end groups of  $\text{-CF}_3$ . Further, Schreyer teaches additional fluorinated methyl end-groups add stability give improved corrosion resistance (column 1, line 15-column 2, line 72; table IV).

11. Detection by infrared analysis is a moot point. Additionally, it is unclear what the 'stabilizing process', referred to by Applicant on page 4 of the Remarks filed September 29, 2009, refers to. It is noted that claim 10 recites "A stabilized fluoropolymer obtained by..." If the stabilizing process is a reference to the 'stabilized' fluoropolymer, the limitation would be met by

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the polymer not containing any C-H bonds. The combination of Curtin and Schreyer teach this limitation (see above, paragraph 8).

12. Applicant's statement: "Therefore, "free of C-H bonds" does not mean "free of unstable groups having C-H bonds" is not supported by evidence or arguments. Applicant argues that unstable groups are undetectable by IR when the polymers have high molecular weights. This does not address how a polymer with no C-H bonds can have a group having a C-H bond.

13. Therefore, Applicant's arguments are not persuasive.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT C. BOYLE whose telephone number is (571)270-7347. The examiner can normally be reached on Monday-Thursday, 9:00AM-5:00PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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